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METHANON KAEOKRACHANG

Summary
Motivated software engineer with a keen interest in artificial intelligence and data science methodologies. Seeking a challenging role to leverage skills in machine learning, software development, and project leadership.

Education
Bachelor of Science in Computer Science
King Mongkut's Institute of Technology Ladkrabang (KMITL)
August 2019 - July 2023

Work Experience

Software Engineer Internship
CMKL University
May 2022 - August 2022

- Collaborated with the Software Engineering team to implement ElasticSearch, improving data retrieval efficiency.
- Assisted Senior Software Engineers in developing Python scripts for log parsing and storage in MongoDB, streamlining log analysis.
- Conducted in-depth analysis of log sources using Linux commands for effective troubleshooting.
- Successfully deployed the project on Azure, gaining valuable experience in Python and Linux environments.

Programmer Internship
Triple T Broadband
October 2023 - January 2024

- Developed a modern user interface using Bootstrap 5 and enhanced legacy functions in PHP and JavaScript for the License System and Asset Management.
- Side project: Digital Number Detection Experiment and Model Deployment on Web Application using ONNX JS (Triple T Broadband Dataset).
    - Built an object detection model with digital number images labeled on Roboflow and trained YOLOv8 on Google COLAB.
    - Deployed the model as a web application achieving a refresh rate of 40 FPS.

Skills & Tools

- ***Programming Languages:*** Java, Python, PHP, JavaScript, SQL, HTML, CSS
- ***Data Science & Machine Learning:*** Supervised Learning (KNN, Decision Tree), Unsupervised Learning (K-Means), Deep Learning, Computer Vision, Python (TensorFlow, PyTorch, NumPy, Matplotlib, Scikit-Learn), Google COLAB, Kaggle
- ***Web Development:*** Python (Flask, FastAPI, Django), JavaScript (Node.js, Express.js), PHP, NGINX, PostgreSQL, MySQL, MongoDB, SQL Server, Swagger, Github, Docker, Azure

Projects and Leadership

Student Project Leader
Streaming Movies Website (3rd year in King Mongkut's Institute of Technology Ladkrabang)

- Led a team of 9 students in developing a video streaming website in a software engineering class.
- Orchestrated the deployment of the project using Docker to Azure Container under the concept of Microservice.

Research Assistant (3rd year in King Mongkut's Institute of Technology Ladkrabang)
Diagnosis Classification of Otitis Media Disease from Otoscope Image (KMITL Digital Analytics and Intelligence Center)

- Collaborated with supervisors to label middle ear images and identify accurate computer vision algorithms for classifying disease types.
- Achieved 85% accuracy with the RestNet18 algorithm for disease diagnosis.

Special Problem (4rd year in King Mongkut's Institute of Technology Ladkrabang)
Classification of Otitis Media Factors from Otoscope Image (KMITL Digital Analytics and Intelligence Center)

- Experiment on components of middle ear like fluid, retraction, transparency, color, perforation that doctors recognized as factors to classify disease type for practice purposes in medical school.
- Under a small size of dataset(200 images), use fine-tuning techniques for a few layers for getting hidden features of image, augmentation techniques like rotation and flipping for imbalanced class and small dataset problems.
- For our CNNs experimental results, we've got the accuracy of 60.0 % for fluid(Xception), 51.1% for retraction(ConvNext),45.3% for transparency(Xception), 25.9% for color(Xception) and 68.9% for perforation(MobileNetV2). In traditional ML, 60.0 % for fluid(SVM), 51.1% for retraction(Decision Tree),45.3% for transparency(XGBoost),30% for color(XGBoost) and 68.9% for perforation(XGBoost).
- In conclusion of the study, traditional algorithms still have good accuracy on small sized dataset with Otitis Media factors tasks.